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What do Commissars do?

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Summary. – The note considers the possible interaction between the narrowing of wage differentials in China and the degree of hierarchy-cum-supervision at the plant level in the Chinese economy. It is argued that the Chinese regime may end up with greater hierarchy in its techniques of production, paradoxically, as a result of the narrowing of wage differentials. In developing this thesis, the note raises an issue of novelty in the theory of comparative economic systems.

Among the interesting facts and impressions with which Sinologists have come out of China are two:

(1) that the wage differentials have been narrowed dramatically *vis-à-vis* both KMT China and the capitalist world outside;¹ and

(2) that, despite the tendency to send intellectuals (both as a 'corrective' to their bourgeois sentiments and as 'punishment')² to occasional furloughs in the countryside, the Marxist notion of the 'compleat man' is not seen to be an objective of policy: indeed, according to John Gurley, who lectured at MIT in October 1972 after a three-week US-radical-economists' tour of China, the tendency towards 'specialization' in jobs was no smaller, and perhaps even more pronounced, if impressions were any guide.

Impressions are, of course, often treacherous guides; and in Sinology, where facts are scarce and enthusiasm abundant, a willing suspension of disbelief—T. S. Eliot's sure guide to aesthetic pleasure but also the certain road to scientific failure—much too often seems to displace hard, scholarly scrutiny.

In this instance, the impression that perhaps the Chinese are, if anything, over-specializing the tasks of their workers—thus, presumably, in that regard, reinforcing the Smith-Ricardian tendency to division of labour and specialization—is, if correct, a paradox. And, since the ideological bias of the radical observer of China is likely to be in the direction of stressing the Chinese achievements in socialism, this possible paradox is both probable and worthy of an explanation.

I would argue that the two phenomena listed above—the reduction of wage differentials and

the failure in such an egalitarian society to reorganize tasks so as to 'enrich' work by reducing specialization and hence hierarchy³—are not merely likely to reflect differences in

* This note is written in a somewhat light vein, but is addressed to raising an analytical question of novelty and also some importance in the theory of comparative economic analysis. I am indebted to Michael Piore for bringing the Butera (1972) paper to my attention; the discussion of workers' control by Sheldon Friedman, Michael Weinstein and others in the Political Economy and Theory Seminar at MIT was also stimulating. Bent Hansen, Paul Streeten, T. N. Srinivasan and Martin Weitzman have made useful comments. Thanks are due to the National Science Foundation for financial support; the research facilities of the Institute for International Economic Studies, Stockholm, are also appreciated.

1. See, for example, Ishikawa (1972) p. 344.

2. See Goldman (1971) for examples of Chinese literary intellectuals who were occasionally sent to the countryside as part of 'rectification' programmes.

3. I am assuming, as is evident below, that job enrichment *via* reduced specialization is correlated technologically with reduced hierarchy (resulting from a reduced need for supervision) in the organization of work at the plant level. I am also abstracting from the possibility that, if a 'third' factor, say 'capital', is also cheapened (as it may well be if capital is not adequately priced as in early communist phases), then the effect I am discussing may not be inferrable without further restrictions on the degrees of price changes and the nature of the substitution-complementarity relationships. Further, it is obvious that the 'enrichment' of work may lead to reclassification of the supervised workers and increase their absolute wages.

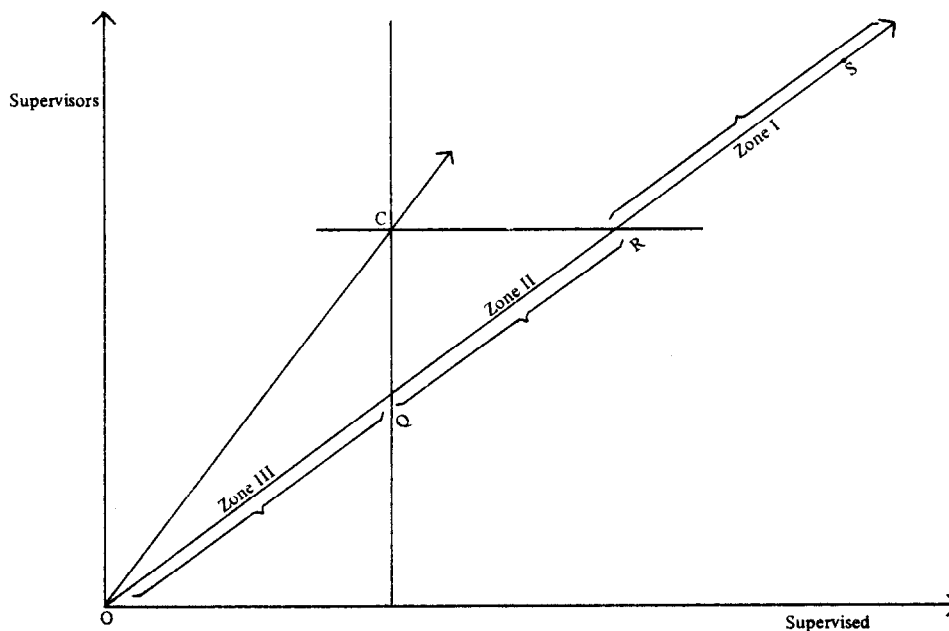


Figure 1

the priority and sequence in which the fully-socialist society is sought to be realized, but could also be functionally related to each other. More directly, the reduction of wage differentials, such that the socialist society rewards the 'supervisors' (and 'foremen') less, could create incentives, in microdecision-making at the plant level, to choose 'techniques' which involve the use of relatively *more* supervisors, rather than less. A neoclassical (i.e., cost-minimizing) commissar at the plant level may, *ceteris paribus*, have an incentive to opt out of the socialist objective of the complete man as wage differentials reduce.

Thus, consider Figure 1 where 'supervisors' and the 'supervised' are measured along the vertical and horizontal axes, respectively. For any specified output level, let the point C represent the 'capitalist'-type process of production. The reduced-hierarchy type of process, on the other hand, is represented by a lowered ratio of supervisors to the supervised: the underlying technological assumption is that increased specialization (e.g., a conveyor-belt process) involves more supervision per (supervised) worker. Let this alternative 'technique' of organizing the work process be OS (less steep than OC).

Now, in general, as the relative price of the supervisors falls, the neoclassical commissar will have an increased incentive to choose the 'capitalist' technique OC in preference to the

'socialist' technique OS. But what *actual* choice emerges depends, of course, on (i) the degree of reduction of the wage differential between the supervised and the supervisors and (ii) whether the constant-produce point on OS, corresponding to point C on OC, is in Zone I (RS→), Zone II (QR) or Zone III (OQ).

Zone I, of course, is dominated costwise by C and would therefore not be observed by a visiting Sinologist: the neoclassical commissar would rule it out. Zone III would imply that the Sinologist *should* observe the 'socialist' technique: but so would he observe it in the capitalist world: hence there would be no difference between the two systems.

The really interesting contrast, and our paradox, could arise in Zone II, where a sufficient reduction in the wage differential could make the socialist society choose the 'capitalist' technique while the capitalist society with wider wage differentials chose the 'socialist' technique. Is this happening in China?

In conclusion, some further points must be noted.

(1) While the plant-level choice of technology will indeed be deflected, *ceteris paribus*, to 'capitalist-type' techniques as wage differentials are narrowed, one may well ask whether the supplies of the supervisors and the supervised would not react so that the reduced incentives reduce the over-all supply of supervisors and hence increase the aggregate ratio of

the supervised to the supervisors. This is, however, not a serious objection if, on the basis of reports about decentralized decisionmaking in China, one argues that the derived demands for supervisors and the supervised, emerging from plants across China, are aggregated and matched by Peking *via* manpower planning.

(2) We know precious little about the possibility of varying techniques in the sense of Figure 1, although much is known about the usual substitution of capital for labour in all sorts of ways.⁴ Nor can we do more than speculate, if such variation were to obtain, as to which zone the 'socialist' technique would tend to lie in. Among the interesting empirical discussions of such a choice is that by Butera (1972) who has reported on the systematic attempt by Olivetti—paradoxically, a capitalist firm—to reorganize its task requirements of design on two major products in 1972, so as to assign more responsibility and richness in work to workers.⁵ The new job designs did reduce, as it happens, the degree of supervision that the original Taylorian method of organizing the assembly line (with duller jobs and 'excessive' specialization in tasks down the line) had required.⁶

(3) Another question of interest is: when would firms *develop* these 'socialist' techniques of production? This is virtually the same problem, of course, as that raised by the direction of R & D research. There are two routes that may be taken here, both of which would seem to bear on the question of whether the socialist society was likely, in the long run, to direct R & D towards developing 'socialist' (i.e., OS-type) techniques.

(i) The first approach is 'economic'. Do reduced wage differentials, aside from favouring the choice of 'capitalist'-techniques from the given smorgasbord of techniques, also make R & D oriented towards developing *new* 'capitalist', rather than 'socialist', techniques? We already know that the direction of the search process must really be independent of the current factor prices: thus the notion that dear labour prompts capital-using innovation is not logically tenable.⁷ On the other hand, one *can* sustain a more limited statement: that, as between two economies with different capital-labour price-ratios, the pay-offs from the same search would be greater for capital-intensive innovation in the capital-cheap country and therefore, *comparatively speaking*, the R & D effort of the capital-rich country would be tilted in favour of the capital-using-innovation zone. It is undoubtedly this logic which leads, for example, to the fact that, in a QR-ridden

India where locally-available materials are relatively much cheaper than imports, one finds relatively greater R & D orientation towards producing local-material-using technical change.⁸ Thus, one could say that a socialist society with reduced wage differentials may also find its R & D oriented relatively more towards searching for 'capitalist'-type techniques! Full socialism would thus get further away from grasp!

(ii) But this argument should be immediately qualified by the fact that *politically* a socialist society may well be searching for 'socialist'-type techniques. The 'economic' argument spelled out in (i) above pertains to what decentralized, micro-level commissars would be working towards, if left to themselves. But the political objectives could well set a *centralized* policy on R & D, under which the R & D-search could well be reversed in the 'socialist' direction. Whether, in fact, the Chinese communists have this *political* objective, which could eventually generate such work-process job designs of a 'socialist' type is not, however, readily obvious.⁹ Indeed, there

4. See Bhagwati (1966) Ch. 20, for a discussion of alternative ways in which techniques may be varied even when the 'equipment' is given. A recent theoretical paper of interest in this connection is Arrow, Levhari and Sheshinski (1972).

5. Other examples of such efforts include Xerox, Volvo, General Foods and Phillips; all of them seem to support the notion that the degree of supervision falls off as jobs are enriched.

6. Unfortunately, however, until more systematic data become available, it is not possible to determine which zone the new techniques lay in.

7. Recall the familiar literature on the problem: Kennedy (1964), and Samuelson (1965), (1966).

8. See Bhagwati and Srinivasan (1975) Ch. 12. There is also a thesis in progress on R & D in the Indian dyes and pharmaceuticals industry, by Bruce Kutnick (1975), which explores this hypothesis systematically.

9. Marglin (1971) has recently argued that the historic origin of hierarchy in job design is the capitalist intention to 'divide and rule' over the overly-specialized workers. While his thesis is logically incomplete—it does not satisfactorily deal with the question of free entry, for example—and historically not necessarily accurate, it is suggestive. On the other hand, Soviet experience shows clearly that neither workers' control nor job-enrichment-and-diversification has been the outcome of a socialist revolution. Can it be that the logic of the dictatorship of the proletariat requires that industrial organization also should reflect discipline and lead perhaps to a general preference for techniques which involve greater hierarchy at plant level?

seems to be practically nothing in the literature on Chinese social and political objectives that suggests that this is one of the centrally-held-and-pursued objectives of the Chinese government. The paradox of the neoclassical commissar therefore may well endure into the future.

(4) In conclusion, it is probably worth noting explicitly that the argumentation in this note relates to specialization (and hence the ratio of supervisors to the supervised) *within* enterprises. As Bent Hansen has correctly pointed out to me, however, the capitalist system may well be more economical also in the use of 'supervisors' in *between-enterprise* specialization because there is likely to be greater reliance on the market. Even then, one might argue that, in place of supervision-cum-co-ordination, the capitalist system may absorb resources in the form of a 'superstructure' consisting of salesmen, Madison Avenue, etc. Furthermore, as Paul Streeten has commented to me, the relatively decentralized socialist regimes (such as China presumably) are likely to require a smaller bureaucracy supervising-cum-co-ordinating at the over-all between-enterprise level than the centralized socialist regimes (such as the Soviet Union).

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